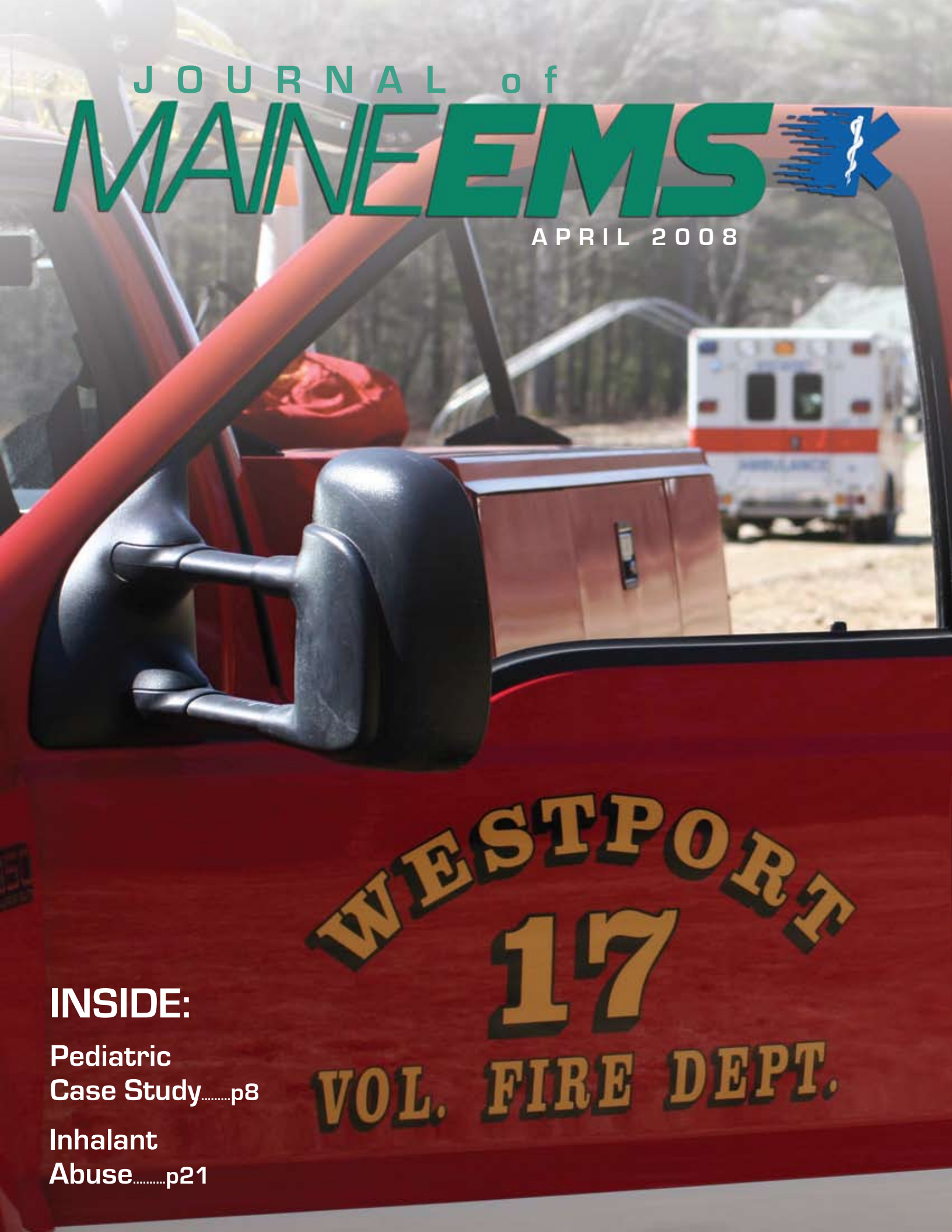

JOURNAL of MAINE EMS

APRIL 2008

INSIDE:

BY JAY BRADSHAW, EMT-P
DIRECTOR MAINE EMS

Weather Connection

Several months ago, someone commented to me that I often start this column with a comment about the weather, and I didn't deny it. Weather is a big deal to those of us in Maine. For some it's the reason why we live here – for others the reason why they leave. But how could we ignore the incredible weather we had this winter?

As I'm writing this, there are still many homes whose first story windows are difficult to see, including our own. It seems like our cars have been filthy forever, and the snow plow guy has become like an extended family member.

If the Summer turns out to be the polar opposite of Winter, woo-hoo! It will all be worth the back breaking hours we spent shoveling and chopping ice. If not, there may be a big "For Sale" sign at the Piscataqua River bridge.

Changing faces, changing places

In January we welcomed Jan Brinkman, RN, EMT-P, as our new EMS Training and Education Coordinator. Jan has been actively involved in EMS for many years in many capacities; as a first responder and a full time paid paramedic. She has been an active EMS instructor in the greater Farmington area and coordinated a very successful summer safety program for children. Welcome, Jan!

Also in January, we said "see you later" (we would never say good bye) to Carol Pillsbury, who served on the Board of EMS since August 1997. Carol's most recent term had expired and Bob Hand, EMT-P, Director of PACE Ambulance Service was named. There is no way in a sentence, a paragraph, a page, or a full issue we could ever list all that Carol has done, and continues to do, for EMS. So for now, we'll just say thanks. A very heartfelt thanks from those of us who have had the pleasure to work with her – and also on behalf of all those who don't know her personally, but who are part of a statewide EMS system that is clearly better because of her involvement.

We also welcome Jim Ryan, Director of the Penobscot Regional Communications Center to the Board of EMS. The back cover of the Journal has a complete listing of all Board members and their contact information.

New web site launched

Visitors to our web site have noticed that the layout has changed. This change was done for several reasons, including compliance with ADA requirements and to make navigating the site consistent with other state agencies.





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Cover photo by Cathy Case.

From the web site you can download license applications, training material, check on CEH status, find your regional EMS office, a directory of Maine EMS staff, an archive of meeting minutes, and a lot more. Please check it out next time you are online and let us know what you think.

AEDs donated to Maine schools

In February, Defibtech donated 25 AEDs through Sen. Collins' office to Maine schools. The schools selected to receive these units were identified by the regional EMS offices taking into consideration the school's size, location, and role in the community (e.g. town meetings, sports and cultural events, etc.). According to Dr. Glen Laub, Defibtech CEO, Maine was selected for this donation because of our statewide system approach to EMS and our experience with the Rural Access to AED Grant that was originally co-sponsored by Sen. Collins.

EMS Week

Every year, the American College of Emergency Physicians select a theme for EMS Week (May 18-24, 2008). This year's theme is: "EMS: Your Life is Our Mission".

Around the state and around the country, this is a week when attention is turned to promote the public's understanding of EMS and to appropriately recognize those who are involved.

At the local and regional levels, many services and hospitals will host events. At the state level we will have the annual EMS awards at the State House. Then at the national level there is the national EMS memorial bike ride (New York City to Roanoke, VA) and the National EMS Memorial Service in Roanoke on May 24.

This year's national service will have a special meaning for those of us in Maine because it is when Alan Parsons' name will be added to the Honor Roll of EMS providers who have died in the line of duty. Several members of the Maine EMS Honor Guard are planning to attend this ceremony and established a fund raiser through Southern Maine EMS to defray the expenses.

If you would like more information, please contact Ron Morin at 1-800-660-4307. Email: rsqvehic@tdstelme.net.

See you in a few months.

Kennebec Valley News

KVEMSC Launches New Website

As some may have already noticed, our website www.kvems.org is new and exciting, and we give all the credit to Matt Thomas who has worked with our IT support at WebMaine to redesign our website and we are very excited with the results. Matt has made our website easy to navigate and easy to update. Keeping it current in the past was difficult for staff because of the many layers of software that needed to be used. We are now able to update with a few simple key strokes making it so easy to keep current. Our site is now bright and full of useful resources. We are looking for any photos you might have of your base, trucks, trainings or calls for our photo section. Please send them along to us and check out our site and let us know what you think of the new changes.

KVEMSC EDUCATION CORNER

Brian Chamberlin, Education Coordinator brian@kvems.org

The 2008 Protocol Rollout- began in late February and will continue through the Spring. This training is a required update for all levels of EMS providers on the changes to the 2008 Maine EMS Protocols. If you or your service has not attended this training, please contact the regional office for assistance.

KVEMSC has trained a number of instructors in the following programs and would like to invite services across the state to contact Brian at KVEMSC if you are interested in scheduling one of them for your service.

Geriatric EMS Program (GEMS) - One day, 8 hour, class that focuses on geriatric patients and the challenges that face EMS Providers every day when dealing with this ever growing and challenging population.

ACLS For Basic EMTs - An 8 hour class designed to inform Basic EMT's of what takes place on an ACLS call. This class will touch upon ECG's, medications, and skills used by ALS Providers in an effort to provide BLS providers with a better understanding of what is happening.

Ambulance Vehicle Operators Class (AVOC)- This course is required for all EMS Personnel who routinely operate an ambulance in emergency mode or when transporting patients.

Defense Tactics 4 EMS (DT4EMS) - This class will be a Train-the-Trainer Program for the Defensive Tactics for EMS. The class focuses on teaching EMS Providers safe ways to handle and mitigate a tense situation where they or their partner have been placed in a dangerous situation on an EMS call. The class is tentatively scheduled for August. More details will be forthcoming. Class size will be limited and the class will be for a full week (5 days).

Future programs in Region 3 are:

EMT-Basic
Summer-Beginning in late May 2008: KVCC Campus
Fall-Beginning in late August 2008: KVCC & Augusta Buker Center

EMT-I
Fall-Beginning in late August 2008
Applications and Testing will start mid to late July.

EMT-P
Spring-Beginning in early January 2009
Applications and Testing will start mid to late October 2008

As always any requests for PEPP, PHTLS, or anything else at your service level, feel free to call KVEMS 877-0936.

Mid Coast EMS News

MEMSRR Training Sessions

MCEMS has assisted Maine EMS in holding MEMSRR Electronic Run Reporting training programs throughout the region and will continue in assisting in meeting completion goals for late fall. MCEMS services are to contact Ben Woodard at Maine EMS or MCEMS for further assistance in implementing MEMSRR use with their service.

New AHA Programs

The following new AHA programs will be offered at the MCEMS training center and available for on site scheduling:

ECG and Pharmacology – a two module program focused on specific ECG recognition skills and drug treatment knowledge. This is a precourse option for ACLS students and other healthcare providers. The 3.5 hr. ECG module and 2.75 Pharmacology modules can be taken separately. Certification/EMS CEHS provided.

PEARS – The Pediatric Emergency Assessment, Recognition, and Stabilization course was designed for providers who are exposed to pediatric patients, but may not take PALS because it is too advanced. The main focus is prevention, and specifically the EARS of pediatric victims at risk of severe cardiopulmonary distress. This program, with unique learning tools, is 7 hours in length. Certification/EMS CEHs provided.

Airway Management – new and unique program specifically designed to give students the opportunity to learn and practice and demonstrate many airway skills used in resuscitation, including BVMs and Airway Adjuncts, LMAs, Combitubes, Endotracheal Tubes, and Impedance Threshold Devices. This program is up to 5 hours in length. This course does not provide certification, but provides students with an opportunity to enhance their skills, EMS CEHs provided.

Online Emergency Nursing Course Available to Miles ED Nurses

As a result of a generous contribution by Miles Memorial Hospital Auxiliary League, 6 emergency room nurses from Miles Memorial Hospital have the opportunity to participate in a new, state of the art, Emergency Nursing Orientation Online Course. The course is comprised of 42 modules examining clinical foundations of emergency room practice and nursing, major trauma, medical and surgical emergencies and special patient populations. This interactive course is designed to strengthen the knowledge and skills of both new and veteran Emergency room nurses, as well as heighten critical thinking skills. The course utilizes an integrated case study approach along with video and audio segments, reading selections from Sheehy's Emergency Nursing, Principles and Practice, with reinforcement of key content with multimodal approaches to learning. Nurses will earn 40 CECH for completion of the course.

Camden First Aid Association's Holds "Open House"

The Camden First Aid Association will be sponsoring an "Open House" on May 17 from 9:00 am to 1:00 pm with a variety of over 25 displays, activities, demonstrations, food, and entertainment, starting off the celebration of National "EMS Week", with an educational and enjoyable event for the whole family. Participants will include Haz-Mat equipment from Rockland EMS, State Police "Ruger" (Canine Unit) demonstration, LifeFlight of Maine, Seat Belt Convincer and Child Safety Seat Checks, "Clowns & Face Painting", High Angle Rescue, and many more. The CFAA is located on 123 John St. in Camden, for further information, call 236-8087, or you can visit www.midcoastems.org.

Safety Belt Education Project

Mid-Coast EMS is scheduling free safety belt demonstrations through the use of the "Convincer" or Rollover Crash Simulator. Available beginning April 1st theses are mobile devices provided by the Bureau of Highway Safety. The Convincer allows volunteers to experience a 5 mph crash and effectively demonstrates that safety belts really work. The Rollover uses dummies (sorry, humans not allowed) to dramatically demonstrate what happens to unbuckled occupants during a rollover crash. Which ever device you choose, these safety belt demonstrations will provide an entertaining and educational resource for your EMS events. For more information visit our website. www.midcoast ems.org.

To schedule a demonstration contact: Rick Tarr ph. 592-0349 or email: rickmidcoastems@yahoo.com

Licensure Education

Two EMT-B courses will be ending this spring, one evening adult program in Union, as well as one High School program at the Waldo Reg. Tech. center. MCEMS is currently re-evaluating the provisions for EMS licensure courses throughout the region and establishing enhanced standards to accommodate state and federal requirements and goals for the future. The Regional Educational Committee and staff meet monthly, develops standards of education within the region, approves and monitors programs, and implements and carries forth specialty programming initiatives, and sends a representative to participate on the State Education Committee. The Committee is made up of educators and providers throughout the region.

continued on next page

Aroostook EMS Region 5 News

Aroostook County Fire Chiefs Assoc. & Region 5 Aroostook held a Legislative Breakfast on Feb. 16, 2008, at the Caribou Motor Inn. Area ambulance directors and their families had the opportunity to voice opinions and concerns about EMS and other issues to several Legislators that represent Aroostook County.

The Aroostook Region 5 EMS for Children Committee and Northern Maine General Hospital offered training for families related to Children with Special Needs. The program targeted clients served by Bridges & Northern Maine General Hospital. Topics discussed were: How to access 9-1-1, identifying a true medical emergency, basic first aid skills, and CPR techniques. The program was held in February in both Mars Hill and Fort Kent.

Local Paramedic retires after nearly three decades in Emergency Medical Services.

On Saturday Feb. 23rd 2008, over 70 individuals conviened upon Tangs restaurant in Madawaska, to congratulate Percy Thibeault of Madawaska Ambulance, for his 30 years of service to the Town as a Paramedic.

Madawaska Ambulance Service Director Dan Chasse presents Percy Thibeault with an EMS wall clock to honor his 30 years of service to the town.

Percy truly personifies "excellence in EMS" according to Steve Corbin, Regional EMS Coordinator for Aroostook EMS Region 5.

Corbin adds that in addition to the many years of service, Percy has been instrumental in teaching his EMS skills to many people in the St. John Valley, and to insure that licensed providers, continue to receive top notch continuing education programs.

Mr. Thibeault's contributions were recognized by Law enforcement, EMS officials, and many other folks who came out to join Percy and his family in the celebration, which was kept a secret to honor him by surprise.

His last official day with Madawaska Ambulance was Feb 29th. "We are definitely going to feel the impact made by Percy's contributions for many years to come" said Corbin. He has certainly made a tremendous effort on behalf of the communities which he has served in the St. John Valley.

The two hour ceremony was followed with a presentation made by Dan Chasse (Service Director) who presented Mr. Thibeault with an EMS wall clock which was purchased by the members of the Madawaska Ambulance staff.

Mid Coast EMS News

continued from previous page

MCEMS Council Meetings are held the third Wednesday of each month at locations throughout the region. April – June are in Union at 7:00 pm at the Thompson Community Center. The office and conference room is located at 51 So. Union Rd., in Union, Maine 04862 207-785-5000, 323-0230, or at www.midcoastems.org.

MEMSRR Update

Electronic Run Reporting Start Dates Set

Ben Woodard, EMT
EMS Data and Preparedness Coordinator

At their meeting on January 2, 2008, the Board of EMS established January 1, 2009, as the date for all EMS services to convert to electronic run reporting using the Maine EMS Run Reporting System (MEMSRR). This date was chosen after taking into consideration many factors, including the time needed to train providers and the budget impact of running two parallel data systems (paper-based and electronic format).

To help make this transition as smooth as possible, effective dates for electronic data entry have been established on a regional basis as follows:

- July 1, 2008: for Aroostook EMS and Tri County EMS Services
- October 1, 2008: for Kennebec Valley EMS and Mid Coast EMS Services
- January 1, 2009: for Northeast EMS and Southern Maine EMS Services

There are three methods to enter run reports into MEMSRR:

- Enter an electronic run report from a computer with Internet access at the hospital, service base, or other location. This method will utilize the free Internet application at: www.memsrr.org .
- Enter an electronic run form using the ImageTrend EMS Field Bridge application. Run reports created using Field Bridge are then uploaded to the State Bridge via the Internet. Field Bridge is a Windows-based client application that requires one licensed copy per tablet PC or laptop.
- Import an electronic run from a state certified software vendor. Effective January 2, 2008, Maine EMS will only test data imported from software that has been NEMSIS certified at the Gold standard.

MEMSRR training for State Bridge and Field Bridge will be conducted at the regional level by Maine EMS. In addition, live Internet-based "webinar" training conducted by ImageTrend will be available directly to services. There will also be MEMSRR instructors to help services with training; however, it is recommended that each service identify a service administrator to attend the train-the-trainer programs conducted by Maine EMS.

To help with the purchase of hardware and software, there are a limited amount of grant funds available. These funds do require a cash match provided by the service that ranges from 25% - 50%. Services interested in applying for grant funds should do so as soon as possible.

Please feel free to contact me at: 626-3860 or ben.woodard@maine.gov for more information on training options, the availability of grant funds, and general questions on how to start using the MEMSRR system.

MEMSRR Tips

For providers using the web based State Bridge and mobile Field Bridge software the learning curve has shown to be approximately 6 practice run reports. Probably the most challenging part of learning how to enter a report is the drop down lists. These lists are part of the NEMSIS (National EMS Information System) dataset that states are using to create a national database. The only way to gather this information is for all states to use the same collection criteria. This means very little text entry and the use of drop downs, check boxes and radio buttons. Even if you use different NEMSIS compliant software you will have the same choices. The key is to enter accurate information. Do not get focused on a 100% validity score. If you did not get a time, leave it blank. Bad data is called "GIGO"- garbage in – garbage out. MEMSRR and the NEMSIS project both depend on accurate provider input and support for success.

An excellent feature in the State Bridge is the "Forgot Your Password" found on the Login page. To use this feature a provider needs to add their e-mail address to their primary service roster profile.

The first step for Service Chiefs in using electronic run reporting is to build the database for your service to make the run reports specific to your area. This process takes approximately 30 minutes over the phone while on the Internet. You can also send in an updated roster before hand to be entered at the system level. No matter how many services a provider works for, they will have one unique username and one password to access www.memsrr.org. This information can be found in the provider's primary service roster. A provider is "associated", or linked, with other services at the system level. Service administrators should send any roster additions or inactivation to the system administrator.

If you have any questions, suggestions or ideas about MEMSRR – or found a tip that you'd like to share with others, please send them to Ben Woodard at ben.woodard@maine.gov.

Southern Maine Community College Updates

Eric Wellman, BS, NREMT-P, CCEMT-P
ewellman@smccme.edu

Southern Maine Community College is proud to announce that our paramedic class of 2008 and 10th graduating class completed the NREMT-Intermediate/99 examination in December. Eleven students completed both the computer based exam and the practical examination with a 100% 1st time pass rate. We are proud of the dedication these students have shown to their education.

This is the 4th year SMCC students have completed the examination as a portion of their paramedic program. The NREMT I/99 standard is a complex level that requires students to complete an assortment of skills and knowledge that includes the traditional Maine Intermediate curriculum plus Advanced Cardiac Life Support and additional respiratory emergencies. Completion of the examination provides students with a reduction of practical stations on their NREMT-P exam and a Maine EMS Intermediate license.

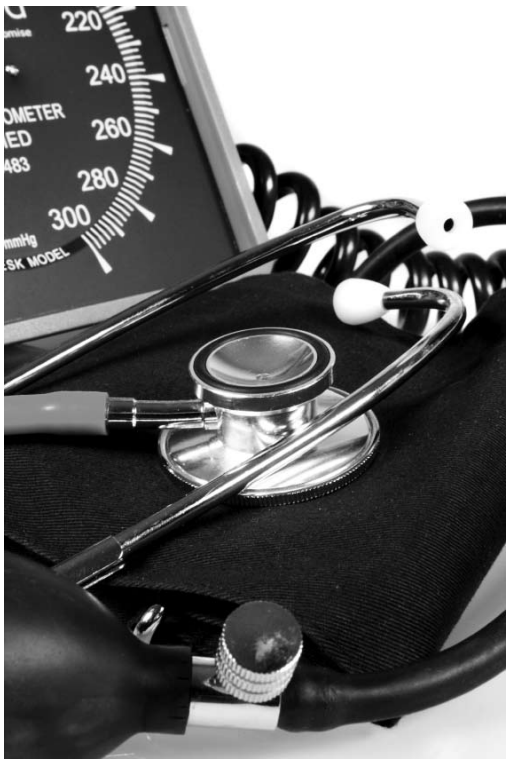
SMCC also completed a semester long University of Maryland Baltimore College Critical Care Transport Program. All twelve participants from throughout northern New England successfully completed the 84 hour program and written examination in December.

During the winter break SMCC and NMCC joined together to complete a 48-hour National Registry Paramedic refresher course. The joint effort was to assist both colleges with accreditation efforts for both college and program accreditations. It further served as a way for instructors on either end of the state to exchange ideas and to learn more about the differences in EMS in the two regions.

Our Program Director, Robert Hawkes, graduated in May 2007 from the UNE College of Health Professions Masters of Science in Physician Assistant Program. In addition to that accomplishment he has accepted a position on the Jones and Bartlett Publishers EMS Editorial Advisory Board. Congratulations to Bob!

SMCC will be sponsoring a National Registry ALS practical examination on Friday, May 16th, 2008 at 0830 hours. Students interested in taking the NREMT-I/85, I/99 or Paramedic examination please contact Robert Hawkes, before April 25th, 2008, by e-mail at bhawkes@smccme.edu to register.

SMCC is currently accepting applications for our 18-month Paramedic Degree Program, starting at the end of August. Prospective students are required to have a minimum of six months experience as an EMT-Basic with at least fifty certified pre-hospital patient contacts. To apply on-line go to www.smccme.edu/apply or call enrollment services at 741-5800 or toll free at 1-877-282-2182.



Pediatric Patients: are they all that different?

When the call comes in and it is a 3 year old who has stopped breathing, does your stress level soar way above that of the same complaint in a 63 year old? Most EMS providers I know would agree that it does. Why is that? We are trained to do the same thing in all patients, establish an airway, assist ventilations, and support circulation. Could it be that our understanding of the pediatric patient is not at that level of an adult patient, as we don't deal with this population in the same numbers? If that is the case, should we not be striving to be better educated about pediatric patients? This series of articles is not a case study in any one pediatric call, but rather an overview of common pediatric complaints and how they are similar and also differ from the same complaint in an adult.

Rapid recognition and early intervention of respiratory emergencies in an infant or child is a priority.

First, let's examine some differences in pediatric anatomy and physiology. This information is EMT-B standard curriculum, but easily forgotten when not used on a constant basis. "The most important anatomical and physiological difference in infants and children relate to the airway."[1] The airway is smaller and more easily blocked by secretions and/or swelling. It is important to remember not to hyper extend the neck because the airway is so flexible, you may actually occlude it by kinking. Due to the large size of the tongue in relation to the mandible and oropharynx, it can easily cause an obstruction in the supine unresponsive infant or child. Correct opening of the airway may be all that is needed to correct this problem. In infants and young children, this is the sniffing position; extend the head on the neck only until the bottom of the nose points straight up. As with the adult patient, in any suspected traumatic injury, the airway should be opened with a jaw-thrust maneuver. "Because most problems leading to death in infants and children are related to airway difficulties, you must be knowledgeable and skilled in these techniques."[1]

Once the airway is open it must be kept open. The nasopharyngeal (NPA) and oropharyngeal (OPA) airway are both adjuncts that can be used to accomplish this. Indications for a NPA are the responsive patient who needs assistance in maintaining their airway. As with the adult patient, if you cannot advance the airway in one nostril, try the other. For the responsive child this may be uncomfortable, even if well lubricated. This may present more of a challenge in a pediatric patient, but is still indicated. The NPA is also less likely to stimulate vomiting, therefore, decreasing the risk of aspiration. An OPA should be used in the unresponsive pediatric patient with no gag reflex. The preferred method of inserting an oral airway in infants and children is to use a tongue depressor to insert the airway without rotating, reducing the potential for damage to the soft palate. [1]

The airway must also be kept clear. "Infants are obligate nose breathers; meaning they will not open their mouth to breath when the nose is occluded. Suctioning a secretion filled nasopharynx can improve breathing problems in infants."[1] While suctioning infants, care must be taken not to touch the back of the throat with the suction catheter. This may not only stimulate the gag reflex or vomiting, it can also significantly slow an infant's heart rate. In an infant, suctioning attempts should be limited to 5 seconds.[2] A bulb syringe is a simple and effective tool to use for suctioning the nasopharynx of the infant patient. The patient must be sufficiently oxygenated prior to and post suctioning. In children, limit suctioning attempts to 10 seconds with adequate pre and post oxygenation. [1]

Rapid recognition and early intervention of respiratory emergencies in an infant or child is a priority. Children can compensate for a breathing problem for a short period of time, by increasing the rate and effort of breathing. This increased work of breathing uses a tremendous amount of energy. After a short period of compensation they may experience rapid decompensation. This will be characterized by muscular and a general fatigue. Beware of this, as it is an imminent sign of respiratory failure. A fast respiratory rate followed by a normal respiratory rate may be a bad sign, especially if the child looks tired or otherwise poorly. Beware of signs of mental status changes, such as drowsiness or unusual tolerance of things such as oxygen masks. Uncorrected respiratory distress can rapidly lead to respiratory failure. If respiratory failure is not treated, the patient will become too tired to breathe.

Unlike adults, pediatric patients do not need to cease breathing altogether for the condition to be considered respiratory arrest. As the patient fatigues or shows signs of decompensation, aggressive interventions must be initiated. [1,2]

Good assessment skills are essential in pediatric respiratory emergencies. Form your general impression using the Pediatric Assessment Triangle (PAT). The PAT looks at Appearance (muscle tone), Work of breathing, and Circulation to skin.[2] In looking at the work of breathing, abnormal findings include things such as increased/excessive effort (nasal flaring, retractions, or abdominal muscle use), decreased/absent respiratory effort, or noisy breathing.[1]

Early signs of respiratory distress include: increased work of breathing, use of abdominal muscles, and mottled skin color. Nasal flaring is also an early sign and occurs in pediatrics as they try to increase the size of their airway by expanding the nostrils. You may also see retractions which can be classified as mild, moderate, or severe. If they are seen only in the ribs, they are referred to as intercostal retractions and are classified as mild. If the muscles of the neck and the area above the clavicles are used for respiratory assistance (suprasternal and supraclavicular retractions), they are considered severe.[1] Abnormal sounds indicative of respiratory distress include grunting, wheezing, or stridor. Grunting is an expiratory sound heard when they attempt to trap air to keep the alveoli open. Stridor is a harsh sound heard usually during inhalation that indicates an upper airway obstruction. Wheezing is a high pitched whistling sound that is usually caused by constriction of the smaller airways or the bronchioles. You may also see seesaw respirations in which the chest retracts and the abdomen rises.[1,2,3]

Respiratory failure is the presence of any of the findings of respiratory distress along with the following: respiratory rate more than 60 or fewer than 20 with signs of fatigue, decreased muscle tone, and poor peripheral perfusion. Altered mental status at this point is an ominous finding. Other signs may include severe accessory muscle use and cyanosis. [1]

Signs of respiratory arrest are breathing less than 10 times a minute, limp muscle tone, and slow or absent heart rate. They also include weak or absent distal pulses and unresponsiveness.

Regardless of the origin of the respiratory emergency, the goal is to restore effective respiratory function. The easiest way to correct the problem is to recognize the seriousness of the condition and to provide oxygen at a high concentration. Act quickly and calmly to avoid further upsetting the parents or the patient. [1]

In respiratory distress, begin with oxygen at a high concentration and allow the child to remain in a comfortable position. A child in respiratory distress will naturally assume the position that gives the best air exchange. A child with a severe upper airway obstruction may assume the "sniffing position" to straighten the airway and open the air passages. One with a severe lower airway obstruction may take the "tripod position" to help the accessory muscles. [2] If the condition worsens and the child shows signs of respiratory failure, you will need to ventilate the child. Assisted ventilations is a difficult skill. As the child begins to breathe in, seal the mask over the mouth and nose, and deliver the ventilation. The correct ventilation rate is 20 per minute for an infant and a child under 8. Ventilate at 10 to 12 per minute for a child over 8. In all cases of respiratory arrest the goal is to prevent cardiac arrest. If the heart rate is below 60 beats a minute with signs of poor perfusion in the infant or prepuberscent child begin chest compressions. [1,2,4]

In the pediatric population early recognition and treatment of respiratory emergencies, airway management and ventilation are of the highest priority. Failure to act rapidly may significantly alter the patient outcome.

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3. http://64.78.42.182/sweethaven/MedTech/FraPkr02.asp?icode=020802
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CEH : Pulmonary Fibrosis : October 2007

Credits: .5 cat 2 BLS Topics .5 Cat 4 ALS Topics : Listed by License Number

16212	23498	23680	17946	18218	19216	12269	19364	22934	21533	16360	22313	23363
23281	19125	14721	17926	23641	03731	19663	22895	15400	23323	18982	19399	14319
23689	16940	22781	23636	12478	08498	05501	21663	22748	19914	14466	04660	17433
14865	16895	22902	05635	15321	12720	13801	19678	22943	21080	15462	23534	15677
12215	22277	17687	08104	19101	20480	23556	20131	20433	12216	21588	17849	23259
23646	15613	19028	22469	08951	22722	17570	21571	20668	16511	12094	05431	23486
22488	23495	11272	21280	16576	22984	19516	20329	17281	14901	23315	10272	
22770	23558	17046	23286	21610	15677	11253	23598	13137	21932	21651	19585	
16858	22170	21274	04911	01885	11452	19513	23471	16793	13959	20514	18455	
22695	15362	18260	19379	07035	15187	19530	12270	13058	17032	23602	21011	

CEH Corner

Once you have finished reading and understanding this issue's article on Pediatric Assessment, you can complete the following 5 questions which pertain to the subject matter. Submit your answers by mail to MEMS Journal, Kelly Roderick, 141 Fairfield Street, Oakland, Maine 04963, or email directly to kr8264@gmail.com

Your license number will be submitted to Maine EMS for credit and will appear on your Maine EMS CEH report.

Your completed questions must be received no later than May 2, 2008 to receive your 1 hour CEH credit. (0.5 Cat 2 BLS topics and 0.5 Cat 4 ALS Topics).

NAME _____

EMS or EMD License Number _____

1. What is the correct ventilation rate for a child under 8?

_____

_____

_____

_____

2. Name 3 signs of respiratory distress?

_____

_____

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_____

3. What is grunting caused by?

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_____

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4. What does "infants are obligate nose breathers" mean?

_____

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_____

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_____

5. Name the components of the Pediatric Assessment Triangle.

_____

_____

_____

_____

_____

BY KEVIN MCGINNIS, MPS, EMT-P

How Many EMS Regions Does Maine Really Need?

I am glad to have had ten good years as Maine EMS director awhile back, because after this, I probably will never be invited near an EMS office again! Yes, I am about to step in it.

The federal EMS Systems Act of 1973 gave birth to modern EMS and its purposeful organization as a true system of care. Among many other things, it originated the concept of "wall-to-wall" coverage (in the words of Dr. David Boyd, one of its authors) of the US by over 300 staffed regional programs, each a not-for-profit organization with a board/council consisting of representatives of stakeholder interests. Each of these was initially established with funding from the Act, and given incentives to put radios in ambulances, train EMTs, establish protocols, and generally build comprehensive EMS systems. Interestingly, regions were funded directly by the feds, and state EMS organizations were generally left out of the loop.

In 1980, a federal report criticized this organization and funding, calling for state EMS office inclusion in this funding scheme and a greater state role in the planning, development, implementation, and coordination of regional EMS systems. By 1982, the EMS Systems Act the federal EMS program were eliminated and its funding was channeled through preventive health and health services block grants, ending up less often in the hands of EMS and especially regional EMS programs (what there was got channeled through state programs).

Models of regional EMS system coordination and support began to vary from state to state. In some states, regional structures disappeared altogether when federal money was denied them and they were not able to be sustained locally based on the strength or value of their services to EMS system participants. As stronger EMS offices developed in these states, they would develop regional EMS offices staffed by state personnel to perform regulatory and technical assistance functions. Other states chose to handle these activities centrally, leaving no regional structure at all. At least one state had and still has regional state office staffs and has created regional advisory boards for local input. In yet other states, state EMS or health structures passed federal block grant, new state general fund, and other monies to its EMS regions to encourage regions to address these issues, recognizing their diversity of needs and ability of representative EMS councils to best address them. Some of these states also chose to establish regional offices with state staffs to carry out regulatory and technical assistance and to interact with the independent councils.

A regional council survey conducted by the National Association of State EMS Officials in 2007, with 36 of 56 states and territories responding, indicated that 47% now have no staffed regions, 28% have kept independent regions, 19% have state-staffed regional offices, and 6% have both. In only 2 states where EMS regions have been maintained as independent entities does the state EMS agency describe the arrangement as working "well" (the remainder saying "somewhat" or "not at all").

Maine has had a history of maintaining five, then six (Mid-Coast EMS was a late-comer), EMS regions and councils. The regions have generally received some amount of state funding with a contract for services expected to be performed for that funding. The remainder of regional funding is derived from training program and other service-based revenue, miscellaneous grants and fund-raising, and assessments from EMS agencies. The relationship between the regional EMS offices and the Maine EMS office has always cycled from poor (mainly over funding issues) to good (state and regional EMS officials meet regularly to do statewide system programmatic planning).

The June 2006 federal Institute of Medicine report on EMS (in three parts on EMS, hospital emergency care, and pediatric emergency care --- read for free or order copies at http://www.nap.edu/catalog.php?record_id=11629) weighs in significantly on the issue of EMS regionalization. It starts by criticizing the systems of today and suggesting a different method of organizing systems into regional, accountable systems of care.

"While today's emergency and trauma care system offers significantly more medical capability than was available in years past, it continues to suffer from severe fragmentation, an absence of systemwide coordination, and a lack of accountability. These shortcomings diminish the care provided to emergency patients and often result in worsened medical outcomes (Davis, 2003). To address these challenges and chart a new direction for emergency and trauma care, the committee envisions a system in which all communities will be served by well-planned and highly coordinated emergency and trauma care systems that are accountable for performance and serve the needs of patients of all ages within the system" (EMS at the Crossroads, Institute of Medicine, P.73).

"Early progress toward the goal of more integrated, coordinated, and regionalized emergency and trauma care systems became derailed over the last two decades…Efforts stalled because of deeply entrenched interests and cultural attitudes, as well as funding cutbacks and practical impediments to change. These obstacles remain today and represent the primary challenges to achieving the committee's vision. However, the problems are becoming more apparent, and this provides a catalyst for change. The committee calls for concerted, cooperative efforts at multiple levels of government and the private sector to finally break through and achieve these goals…. goals of improved coordination, expanded regionalization, and increased transparency and accountability" (EMS at the Crossroads, Institute of Medicine, P.73).

The "increased regionalization" of which the IOM report speaks is not a ringing endorsement of regional EMS programs that exist today. In fact, to the degree that regional EMS programs have had a central role in system accountability and coordination of services, it is a condemnation.

The reality in Maine is that some of the fragmentation that the IOM report criticizes has been mitigated through statewide protocols, the statewide and regional trauma systems, and a high level of communication between state and regional EMS officials. This compared to states where protocols are still written on an ambulance service by ambulance service or hospital by hospital basis, producing great fragmentation.

The IOM brand of regionalization is based on systems of specialty care such as trauma, cardiac, pediatric, and stroke. It suggests developing regions around the patient flow created by hospitals organized to handle these cases, with all hospitals participating at some level, but only a few hospitals at the highest level (as Maine does with its three trauma centers, and including all other hospitals as trauma system hospitals). In theory, there could be different regions in a state for trauma care and for cardiac care if different hospitals served as the trauma centers and cardiac intervention centers. This is one area where the IOM report gets suddenly very silent, not suggesting how a state should practically implement regions so that they are accountable systems of care. It seems to suggest that this is a petty organizational detail and perhaps the trauma, cardiac and other centers of excellence would in effect be the regional staff. This smacks of fox guarding the hen house. However this is handled in other states, it should be a pretty simple matter in Maine. First we must decide if we buy the IOM concept of regional accountable systems of care organized around systems of specialty emergency care as it suggests. System accountability is clearly a must, and our current system does not do a good job of that. We are struggling within the Maine Trauma Advisory Committee (TAC) to develop performance measures that can be reportable to our public on a local, regional, and statewide basis. But we are getting there. The EMS system as a whole is further from that goal than is the TAC. What regional or statewide performance measures are in place that report regularly the structure, process, and outcome status of our efforts?

The current organization of Maine's EMS regions, derived from general health planning organization in the 1970's and 1980's with a dose of geo-politics thrown in. Without further diatribe about the rightness or wrongness of the current regions, let's look at how the IOM's recommendation would shape us. First we would recognize that the three regional trauma centers are housed in the Southern Maine, Tri-County, and Northeast EMS regions. Cardiac intervention centers associated with the STEMI (ST elevation myocardial infarction) effort are similarly distributed. While the highest level of burn care is found in Boston, burns tend to be managed by EMS along those same three lines of transport. Likely too, when designations for stroke, pediatric and other time-critical, resource–intensive intervention care are made, they will have their highest levels of care found in those three regions. An interesting case might be made for a fourth region, in Kennebec Valley, if the candidate facility there ever does what it ultimately must to develop the needed specialty resources by consolidating its two campuses into one (somewhere…anywhere!).

If the IOM is to be the judge, then the writing is on the wall: we must overcome inertia which is hard, and the "deeply entrenched interests and cultural attitudes" of which the IOM speaks, which is harder. We should focus our efforts on consolidating six regions into three. They should be organized to be accountable for the systems of care that they coordinate. This is not to suggest that sub-regional advisory bodies and even resource stations/offices (perhaps part-time or with regional staff split) couldn't be a part of the equation if funds allow. Or, if local EMS interests value services of the current offices so much that they want to fund those services entirely themselves, that is possible as well. But, it is time for Maine EMS to heed the IOM recommendations and get lean and mean about regional accountable systems of EMS care.

Stepped in it good…didn't I?

The Maine EMS Memorial Moves into Fundraising Phase

By Bill Zito, Regional Coordinator, Mid-Coast EMS

The Maine EMS Memorial Project has now begun its fundraising planning, with the campaign to raise $250,000, or more, to kick off during EMS Week in late May, 2008. The goal will be to complete the fund-raising campaign and break ground for the memorial by EMS Week 2009.

Memorial Project chair, Kevin McGinnis, announced that Rick Petrie, regional coordinator in the Kennebec Valley and Northeast regions, has agreed to lead the fundraising effort as chair of that committee. Attending the first Committee meeting in January were Dennis Brockway, Jim McKenney, Tim Beals, Bill Zito, Lori Metayer, Dr. Rebecca Chagrasulis, and Dr. Paul Liebow. The Committee welcomes new members at any time (see the Journal's contacts page for Rick Petrie's information). All donations will be collected in a Memorial Project fund at Kennebec Valley EMS Council, a 501(c) 3, tax exempt, and corporation. Donations made payable to "KVEMSC – Memorial Project" will be tax deductible (please check with a tax advisor to see how this may apply to you).

The Memorial design is scaled to fit well with the existing fire and law enforcement memorials which will flank it on either side along State Street in Augusta, near the State House. It is not a traditional memorial style in that it won't have a large central stone and bronze type construction. While it is expected that there will be a small statue (three feet high) depicting a patient cared for by EMS providers in the middle of the Memorial, it will be joined by a number of innovative visual and audio features.

The view in the accompanying diagram is what a visitor would see upon entering the Memorial from the parking area with the State Library at her back and facing State Street and Capital Park (in front of her, but to the left). To the visitor's right would be a glass wall on a granite pedestal with a welcoming message and a general description of the Memorial and the Maine EMS System and its mission and components. Ahead, at the far side from the entrance, the visitor sees another glass wall, this one square with the traditional Star of Life and "EMS" inscribed. This wall is also directly visible from State Street. Both walls will be brightly lit at night from lights shining up through their bases.

The remainder of the small plot will contain six granite benches for sitting and contemplation, and two to three dozen granite, metal, and glass pillars of random heights (four feet tall or less) placed randomly throughout the area. There will also be a glass wall at the same height in this section, (despite the varied heights of the pillars) also lit up at night, unifying the pillars like the statewide system. The pillars will be topped by one of three types of caps (three different colors of metal, yet to be determined). Each will denote one of three categories of persons being recognized. One type will be EMS providers who have died in the line of duty. A second will be EMS system leaders who have significantly contributed to the founding and development of the statewide Maine EMS system. The first two categories will bear an individual's name and affiliation on the metal cap. Third will be a general recognition of EMS system providers. The caps will bear inscriptions such as "volunteer EMT", "critical care nurse", "emergency physician", "paramedic/firefighter", "emergency medical dispatcher", or "first responder". The scattering of these posts around the site represents the wide variety of EMS providers who work throughout the state every day. Again, in the middle of all of this, will be a statue with a patient being attended by two field providers.

Another unique feature of the Memorial is a planned audio component. Using a cell phone (options for an alternative not requiring a cell phone are also being researched), the visitor can dial into messages unique to the two glass walls (further explaining the EMS system, the Star of Life, and the like) and the granite posts. The messages for each of the posts will describe the contributions of the individuals cited (allowing family and/or colleagues to record messages of tribute as well). The messages for the generic provider posts will describe what each EMS provider job is like, with perhaps messages from people holding those positions. The audio component is intended to give the Memorial a meaningful public education role as well.

The fund-raising campaign details will be announced during Memorial Week. The funds being raised will not only be for construction, but to support on-going maintenance, repair, and replacement as necessary. It is also expected that EMS services will be solicited to sign up for one visit to the memorial to pick up litter and report problems. A different service will visit each week over a year's calendar. One feature of the fund-raising campaign will be a challenge for EMS services and hospitals to contribute in a manner that is fair given the variety of types and sizes of services and hospitals in the system.

The EMD Corner

Drexell White, EMT-P
Maine EMS EMD Coordinator

Governor Baldacci has appointed James Ryan as the Emergency Medical Dispatch representative to the Maine EMS Board. Jim is currently the Executive Director of the Penobscot County Regional Communications Center, a position that he has held since retiring as Communications Supervisor from a 32 year career with the Maine State Police. In addition to his communications career, Jim retired from Naval Reserve Station – Bangor as a Command Master Chief, and continues a14 year stint as a reserve police officer for the town of Hampden. You can contact Jim by emailing him at: jryan@penobscot-county.net .

Beginning in January 2009, Maine's licensed Emergency Medical Dispatchers will start renewing their licenses for the first time. EMDs must renew their licenses every two years and need to accumulate 24 hours of Continuing Education Hours (CEH) as part of the renewal process. While 2009 seems like a long ways off, now is the time for EMDs and EMD Center Directors to reassess the number of CEHs already completed and the CEH offerings planned for 2008. Getting the jump on CEH and training needs will ensure that no dispatcher falls short of the required CEH hours to renew his or her license.

Continuing education requirements for EMDs can be found on the Maine EMS website at http://www.maine.gov/dps/ems/emdcontinuingeducation.html. The EMD Continuing Education webpage explains the specific CEH hour and category requirements required for license renewal as well as information on how to receive approval to conduct Maine EMS-approved CEH programs. There's also a link on the webpage to the Maine EMS EMD-Applicable Standardized CEH List - http://www.maine.gov:8080/dps/ems/documents/StandardizedCEH%20ListforEMDRelatedCourses.pdf . Maine EMS grants standardized CEH approval to state or nationally recognized courses (e.g., American Heart Association CPR) that are conducted in accordance with curriculum and instructors developed by the program sponsor and approved by Maine EMS. To receive CEH for a standardized course that's been approved by Maine EMS, the EMD needs only submit a copy of the (standardized CEH) program certificate as part of the license renewal package.

Another great way to gather the CEHs needed for renewal is to attend conferences like the annual Maine Chapter of NENA (National Emergency Number Association) conference, held every April in Lewiston, Maine. To learn more about NENA, go to their website at http://mainenena.org/

I'll close this edition of the EMD Corner with a news report that illustrates how emergency medical dispatching is making a difference in Maine.

The Washington County Regional Communications Center received a call from a hysterical mother whose 3-year-old son had stopped breathing. Emergency Medical Dispatcher (EMD) Cindy Rossi used her EMD training to calm the mother and instruct her in performing rescue breathing on the child while EMD Richard Moore dispatched Machias Ambulance Service and Trooper Miles Carpenter to the scene. Upon arrival, ambulance personnel were able to restore the child's breathing and transported the child to Down East Community Hospital in Machias and then to Eastern Maine Medical Center in Bangor. Following evaluation the hospital released the child to relieved family members.

Maine Emergency Nurses Association

Tammy Lachance, RN, BSN, CEN
Central Maine Medical Center

It sure has been a snowy winter! While it's fun to go out and play, it sure makes driving treacherous. Unfortunately, the Maine ENA Winter Meeting & Education Day had to be canceled due to inclement weather. We had your safety in mind and we apologize for any inconvenience this caused. The same program has been rescheduled to Tuesday, May 6. Hopefully there won't be another snowstorm!

SPRING MEETING & EDUCATION DAY ~ May 6, 2008
MaineGeneral Medical Center, Waterville Campus
"Because You Asked For It"

Featuring topics that have been specifically requested by the membership:

- Patient Safety and Quality
- Shock: Recognition and Treatment
- Obstetrical Emergency / Delivery in The ED
- Human Patient Simulator Education by Laerdal Corporation

We hope you can join us for this exciting conference! For more information, please contact Carol Minnis, RN, MENA President, at dminnis@tdstelme.net.

ENA-SPONSORED COURSES:

Emergency Nurses Pediatric Course "ENPC" - 2008 Dates - Check the Maine ENA web site at www.enamaine.org or contact Carmen Hetherington, RN, Pediatric Committee Chair, at carmen@suscom-maine.net.

Trauma Nursing Core Course "TNCC" - 2008 Dates - Check the Maine ENA web site at www.enamaine.org or contact Geneva Sides, RN, Trauma Committee Chair, at sidesboss@hotmail.com.

TNCC has been updated for 2008! The new provider course and materials will be available in March 2008. Instructor courses will also be available. So, if it's been a while since you've taken TNCC, now is the time! Topics included in this revision are a new chapter on disaster management, the inclusion of RSI in the airway education, and the return of helmet removal. Check out TNCC on the ENA website, www.ena.org, for more information about the new course.

INJURY PREVENTION – "EN CARE"

EN CARE is the injury prevention institute of the Emergency Nurses Association. The goal is to reduce the number of preventable injuries in the young, the adult, and the mature adult communities through public education, professional training courses and legislative advocacy. More than 5,000 emergency nurses, pre-hospital providers and law enforcement officers have been trained to teach EN CARE injury prevention programs, such as:

- Child Passenger Safety
- Bicycle and Helmet Safety
- Gun Safety – "It's NO Accident"
- Alcohol Prevention Education – "Choices for Living"
- Healthy Aging Education – "Stand Strong for Life"

One eight-hour day is all it takes to be recognized as an ENA Injury Prevention Provider. Anyone can take the EN CARE training course and there is no testing. If you are interested in taking this course, please contact Sarah Scott at sascott19@aol.com.

MAINE ENA WEB SITE
The new and improved Maine ENA web-site at www.enamaine.org is up and running.
It contains lots of information, including:

- Membership benefits
- Upcoming events
- "Maine Matters", the newsletter of Maine ENA
- CEN review questions
- Contact information for officers, board members and committee chairs
- And more! Check it out!!!

CALL FOR NOMINATIONS: The 2008 Maine ENA Awards

Do you work with a spectacular emergency nurse? Someone who deserves a little credit for their talents and efforts? If so, please nominate them for a Maine ENA Award!

You can find more information about the annual emergency nursing awards on the Maine ENA website, in the spring "Maine Matters" newsletter and/or contact Karen Taylor, RN, Chairperson of the Nominating Committee, at taylokd@mmc.org.

SPRING IS COMING!

Please be safe and wear a helmet when riding a motorcycle, bicycle or ATV!

From the I/C News editor…

Greetings all!

Ever notice how for some teachers the underlying message is "It's all about me?"

I'm thinking about the presenter at the conference who starts out with a 15 minute description of all of his qualifications, essentially providing an expanded oral curriculum vitae. Do the students need to know all of that in order to learn something from this teacher? No, but since "it's all about me" he tells it anyway.

I'm thinking about the presenter who introduces a joke by telling the audience how funny it is, how they're going to laugh, how this is just going to be the funniest thing they've ever heard, how the first time he heard it, he... Then he tells it, and it generates nothing more than a polite chuckle from the audience. The reality didn't match the promise. But "it's all about me."

And I'm also thinking about the presenter who scatters throughout his presentation explanations about how, "when I teach this class to [name a group of people], I always tell them [this]." Well, the teacher isn't talking to that group of people, he's talking to this one. Why does this group need to know what he would have told the other group? Because "it's all about me."

And last, I was thinking about the insecure presenter who needs constantly to be receiving feedback and reassurance — no, more than that, more like pats on the back, and praise, and kudos. He needs to tell his classes how many students he's trained over the years and how well they are all doing. This presenter's needs go beyond assuring that he is meeting the needs of the class, and slip into the realm of "it's all about me."

We've all run across examples like these. They should serve to remind us that, when we are teaching a class, our focus needs to be on the students, not on us. While we sometimes need to introduce our credentials, we need to keep it short, sweet, and pertinent. When we tell a joke or a story, we need to let the joke or the story, not how we responded the first time we heard it, be the focus. When we're talking to one group of people, we shouldn't be telling them about how differently we run the class when we're in front of another group. And of course, when we check in with our classes to see if they are getting it or if we need to do something differently to help them with their learning, our focus really and truly should be on what they need, not on how important it is for them to know how important we think we are!

State News

New MEMS Training and Education Coordinator

Jan Brinkman, RN, EMT-P, became the Training and Education Coordinator for Maine EMS in January. The I/C News contacted her to find out a little about her, what her hopes are for this new role, and what kind of background she brings to the position.

Jan first became involved in EMS in 1984 and became a paramedic in 1987. During that time she says she "did a lot of school and community education programs and really enjoyed the educational aspect of EMS." She had to leave field work in 2000 due to a back injury, but kept her EMT-P license current.

She went on to nursing school and graduated from CMMC School of Nursing in 2003, after which she worked in the ICU at Franklin Memorial Hospital for a short while before again hurting her back. Being unable to remain in clinical settings because of her health, she went to work in the Education Department at Franklin Memorial Hospital, where she worked for four years, until she was hired by MEMS.

Jan is also a registered National Ski Patroller and has been an Instructor-Trainer with the NSPS program for years.

When asked about her particular areas of interest in EMS education, she says she thinks it is particularly important to "support the strong I/C team that we are so fortunate to have here in Maine." She also believes researching national trends and standards to keep Maine up to date with EMS systems nationally is important, as is looking at more national and regional standardized courses for MEMS CEH approval. She says she is still "learning the ropes" and is sure there will be much more for her to think about as time goes on.

The I/C News congratulates Jan on her new role, and wishes her well.

Regional News

SMEMS

The Education Coordinator position at SMEMS has been filled as a part time position through June. Paul Salway from Windham assumed that role beginning January 7th.

Teaching Tips

Is there such a thing as a stress-free test? Well, maybe not, but you can certainly provide your students with plenty of testing opportunities to help decrease their stress level over time. One way you can do this is to make tests so routine that they raise stress levels less and less as time goes on. And you can vary the presentation of the tests as well, so that they don't become so routine as to become boring.

For starters, you can plan to ask 10 or 15 fairly simple questions at the beginning of each class. These questions would be based on the content of the previous class. You can write the questions on the board or have them projected overhead, and the students can write the answers in their own notebooks, then grade themselves. Stress-free — if they "flunk," nobody knows but them. But if they flunk often enough, they may begin to see the pattern and realize that they need to do some studying between classes.

You can also resume each class after a break by asking four or five questions based on the material presented during the session immediately prior to the break. It's a good way to ease back into the class, and also to help the students see how well they retained what they just heard. Because you don't have as much time to prepare these after-break questions, you could do these orally and still have the students write their answers.

The benefit of having the students write the answers in both of these testing situations, instead of just asking them to provide oral answers, is that, in order to be able to write the answers, the students have to actually know the answers. It eliminates the possibility of them half-formulating the beginning of an answer and then just nodding that "Yes, yes, I would know the answer to that."

A side benefit of doing these stress-free tests is that, if you keep a log of your questions, you are actually beginning to create a question bank from which you can draw questions for your next written test. A side benefit of writing the questions on the board, having them projected overhead, or asking them orally instead of in written form is that you don't have to spend a lot of time and paper photocopying. Everybody wins!

Please send your teaching tips to the I/C News for use in an upcoming issue.

Waldo County Students get a Jump-Start on EMS

Holly Scribner, EMT-P; WCTC EMS Instructor

Waldo County Technical Center (WCTC) has joined forces for a second year with Kennebec Valley Community College (KVCC) and Mid-Coast EMS to offer high school students an opportunity to get a jump-start on their emergency medical training.

Students have the opportunity to earn their National Registry Emergency Medical Technician-Basic certification and five college credits, in addition to their high school credits.

The program is specifically designed for students who want to explore a different side of healthcare and emergency medicine. Students have the opportunity to take part in various activities focused around medicine, health, and public safety. Each student has the opportunity to work alongside doctors and nurses in the emergency department, as well as EMT's, paramedics and firefighters in the field. Students will also take part in various related field trips, participate in lessons from guest speakers and take additional certification courses that enhance both knowledge and skills.

Waldo County Technical Center's EMS program is pleased to be sending three of its students to this year's State Skills USA competition. Morganne Andrews will be competing in the CPR/First Aid competition, while her classmates Natasha Johnson and Stephanie Klien will be putting their medical knowledge to the test as members of the WCTC Health Knowledge Bowl Team.

This year students have also had the opportunity to visit Paramedic and Advanced Emergency Medical programs around the state, visit Mid-Maine Technical Center's EMS program, and enjoy various speakers from our EMS system.

Committee Briefs

Education Committee

Daniel Batsie, EMT-P, I/C, Maine EMS Education Chair

Protocols, protocols, protocols. The Education Committee's year to date agenda has been filled with protocols. As most of you know by now, the summer of 2008 will see an update to the Maine EMS treatment protocols. And as with any major system change, our committee will play a large role.

After reviewing the proposed changes, the Education Committee was tasked with developing the provider education update. This project included developing a full lesson plan and associated teaching materials to assist instructors in preparing providers to utilize the new protocols. Additionally, a "train-the-trainer" program was developed to educate potential instructors.

Beginning in March, the Education Committee will oversee the roll out of six "train-the-trainer" programs that will take place in each EMS Region. (Providers should contact their Regional Office for dates and details). It is our intent that these instructor courses will prepare services and the local regional offices to develop and roll out their own protocol update courses.

The next step associated with the new protocols will be to develop educational materials for the optional components of the new protocols (CPAP and glucose meter training for basic EMT's). Work on these projects is ongoing.

Additionally, the work on a state licensure course accreditation system continues. Although snowy weather has given us a few delays, the process is developing. In the coming months we will look at the logistics of accreditation, and hope to be prepared to make recommendations to the EMS Board by early Spring. The key will be developing a process that is fair and equitable, cost efficient and meaningful in terms of demanding and enforcing quality standards. We welcome outside input.

Although many other projects loom, we have chosen to hunker down on these two very important topics and see them through before tackling anything new.

We also welcome the addition of Jan Brinkman as the new State Education Coordinator. Her guidance and leadership will be an invaluable component of our team in the coming year.

As always, our meetings (the second Wednesday of each month at 0930 in Augusta) are always open. We welcome your attendance or even your input. Please also feel free to e-mail me (dbatsie@emcc.edu) if you would like to comment but cannot make the meeting.

Exam Committee

By Jacky Vaniotis, RN, NREMT-P, Chair, MEMS Exam Committee

At its January meeting the Exam Committee developed an instrument to survey ICs who have conducted IPE's. The results of these surveys will be used to help determine the future course of licensure testing at the Basic and First Responder levels.

Please feel free to attend any meeting of the Exam Committee, which now meets on the fourth Tuesday of each month at 9:30 a.m. As always, we recommend that you contact the MEMS office to make sure a meeting has not been canceled or rescheduled.

Computer Corner

Learning Styles

Scott A. Smith, RN, NREMT-P, I/C

As adult educators in the EMS classroom, we are all aware of the many differences our learners have. While adult learning styles were addressed in our initial I/C courses, for many of us, it was the first time we were exposed to the concept. Suddenly, a light-bulb moment occurred for many of us way back then. "So that's why I couldn't get it until…" became the mantra for many of us. Yes, the way we were able to learn a particular topic or master a particular skill might be due to our own learning style preferences.

Recently, students in the 2008 paramedic program at KVCC attended a learning styles workshop with Linda Clutterbuck, the Director of the Marden Center for Academic Success at KVCC. Ms. Clutterbuck passed along the list of Web resources below to the students, and I would like to share them with my fellow I/C's. Take a look and remember, the challenge for us as educators is to step outside our own comfort zone and create a student-centered learning environment that teaches to multiple intelligences and styles of learning. What can it hurt — you might just learn something new!!

Left Brain/Right Brain Learners
www.web-us.com/brain/LRBrain.html
Multiple Intelligences
www.thomasarmstrong.com/multiple_intelligences.htm
www.ldpride.net/learningstyles.MI.htm
Myers/Briggs Personality Inventory
www.humanmetrics.com/cgi-win/JTypes1.htm
www.typelogic.com/
Learning Styles
www.metamath.com/lsweb/dvclearn.htm

FREE Graphics to Download

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health has a searchable database of drawings that are free of copyright restrictions. They have anatomy/physiology, lifestyle, and instructional themes, and would enhance handouts and PowerPoint presentations. You can access these graphics by going to: http://catalog.niddk.nih.gov/ImageLibrary/.

tiny URL

Have you ever seen a link that looks something like this: http://www.mapquest.com/maps/map.adp?ovi=1&mqmap.x=300&mqmap.y=75&mapdata=%252bKZmeiIh6N%252bIgpXRP3bylMaN0O4z8OOUkZWYe7NRH6ldDN96YFTIUmSH3Q6OzE5XVqcuc5zb%252fY5wy1MZwTnT2pu%252bNMjOjsHjvNlygTRMzqazPStrN%252f1YzA0oWEWLwkHdhVHeG9sG6cMrfXNJKHY6fML4o6Nb0SeQm75ET9jAjKelrmqBCNta%252bsKC9n8jslz%252fo188N4g3BvAJYuzx8J8r%252f1fPFWkPYg%252bT9Su5KoQ9YpNSj%252bmo0h0aEK%252bofj3f6vCP?

When you copy that link and send it by e-mail to a not-very computer-savvy coworker, your coworker says, "I clicked on it, but the link wouldn't work." The problem, of course, is that each e-mail program allows only a certain number of characters per line. Anything over that amount, and the program automatically moves the remaining characters to the next line, "breaking" the link, so when your friend clicks on the link, he gets an error message.

Or maybe you want to hand-write out a URL (Uniform Resource Locator, the address you see in the "address bar" on your browser window) but it looks like the one in the example above, and you figure it's just not worth it.

There's a solution to both of these problems. Go to www.tinyURL.com and paste your URL into the text box on that page. It will convert your long URL into a short and manageable one that you can then send with confidence that your coworker will be able to follow it.

(By the way, don't bother to try to use the address above. I must have copied it wrong, and it doesn't take you anywhere! Object lesson.)

Are the Copyright Police Looking for You?

Scott A. Smith, RN, NREMT-P, I/C

In October, I attended a continuing education program with a nationally known speaker who suddenly brought up in the middle of her presentation an important concept that I had not thought much about. It revolved around a cartoon which interjected some situational humor about the topic. The speaker reminded the audience that use of works such as that needed specific permission from the copyright holder, and that recent changes in the copyright statutes are now being more vigorously enforced.

Hey, I've got nothing to worry about. After all, I'm just the little guy making 20 copies of that research article or slipping in a Far Side® cartoon in my slide show to spice up a dry lecture. The "copyright police" wouldn't be looking for me. Well, that has changed. As educators, another area of "information age" accountability we must understand is what is and is not the legal and appropriate use of copy-protected works in our classrooms. In addition, the academic institutions or organizations for which we work have a stake in our actions and understanding (or lack thereof) since they may also be held accountable for violations committed on their premises or with their equipment or assets.

In the last several months, students at a number of colleges and universities have come into direct conflict with both their institutions and copyright holders over mass distribution of electronic media through bulletin board services or file sharing programs. At press time, these challenges are still being investigated in the legal system as the federal government struggles to interpret and enforce the Digital Millennium Copyright Act of 2002.

The take-home message at present for instructors is that the use of digital files, images, sound tracks, paper articles, or any type of creative work, whether or not a copyright mark appears on it, is probably protected under current U.S. copyright statutes. You, the instructor, become responsible for a conscious decision to use the original work of another person or group, and must be able to defend the action or supply evidence of prior permission to use the work.

In future issues of the I/C News, I'll take a look at conventional written works, digital works and media, eLearning systems, computer software, and what tips and pearls I/C's can learn from research I've done trying to stay one step ahead of the "copyright police." If you have a specific question or issue you would like to see me address, please e-mail it to me at ssmith6@kvcc.me.edu.

The author wishes to thank the entire library staff and the IT staff at KVCC in Fairfield for their help with this ongoing research for this article.

Last Words

Please submit any materials you would like to have published in the next issue of the I/C News by May 1, for publication in the July edition of the Journal of Maine EMS. Submit material to: Jacky Vaniotis, 172 Haskell Road, North Yarmouth, ME 04097, or email JackyV@Vaniotis.com

Inhalant Abuse

What are Inhalants and How are They Abused?

Inhalant abuse is the intentional concentrating and breathing in of gases and vapors with the goal of intoxication or "getting high." There are more than 1,000 household, shop, office, and industrial products that qualify as inhalants such as fuels, solvents, gases, and products in aerosol cans. They are easily accessible, inexpensive, and draw little suspicion.

Inhalant abuse can result in acute medical emergencies. Sudden Sniffing Death Syndrome can result in instant death due to respiratory arrest. Death can also occur from asphyxiation when high concentrations of inhaled substances displace the available oxygen in the lungs; from suffocation when placing a plastic bag over the head; from choking from inhalation of vomit or a plastic bag; and from fatal injury from accidents, fires, and explosions, according to the National Institute on Drug Abuse. An autopsy study conducted in the United Kingdom showed that 40% of victims of Sudden Sniffing Death Syndrome were first time users of inhalants.

The Maine Office of Substance Abuse most recent 2006 student survey data highlights the extent of this problem. Approximately 1 in 8 students in grades 6-12 have reported use of inhalants sometime in their lifetime.

Reported inhalant abuse by county of students in grades 6-12.

County	Lifetime	30 Day
Androscoggin	13.4	5.6
Aroostook	10.5	4.4
Cumberland	11.2	4.3
Franklin	12.1	3.8
Hancock	12.3	4.7
Kennebec	12.0	4.8
Knox	15.7	5.2
Lincoln	14.0	5.2
Oxford	13.0	5.6
Penobscot	13.0	4.8
Piscataquis	13.3	6.8
Sagadahoc	12.0	4.3
Somerset	12.5	4.9
Waldo	12.6	4.5
Washington	9.9	4.6
York	11.9	5.2
State	12.2 %	4.8%

Risks of Inhalant Abuse

Inhalant abuse can cause sudden death by heart arrhythmia (Sudden Sniffing Death Syndrome), suffocation, burns, or explosions. Long-term effects include damage to the brain, nervous system, liver, kidney, and bone marrow and can lead to birth defects. Users are at risk for both physical and psychological dependence.

Signs of Inhalant Abuse

The following signs and symptoms can indicate that someone may have abused inhalants: mood swings, irritability, anger, agitation, sleepiness, uncontrolled laughter, nausea, loss of appetite, vomiting, hallucinations, convulsions, facial rashes and blisters, constant sniffing and coughing, dilated pupils, and bad breath. The presence of bags, rags, and empty product containers may also suggest inhalant abuse.

For more information email adcare@neias.org or check the website: http://www.neias.org/SATAdcal.html.

Inhalant Abuse: It's Right Under Your Nose

6-HOUR BASIC INHALANT 101 TRAINING

APRIL 1, 2008: HOLIDAY INN WEST, PORTLAND

APRIL 8, 2008: HOULTON REGIONAL HOSPITAL

APRIL 15, 2008: DHHS, MACHIAS

The goal of this training is to acquaint participants with the nature and patterns of inhalant abuse and provide them with effective prevention tools, messages, and resources. The curriculum focuses on substances of inhalant abuse, signs and symptoms. This knowledge will allow EMS personnel to have a better understanding of the potential for inhalant abuse involvement in emergency responses. A brochure and registration form is available on the AdCare web site: http://www.neias.org/SATAdcal.html. You can also email your request to adcare@neias.org or mail this form back to:

Jessica Gogan, Prevention Program Manager
AdCare Educational Institute of Maine, Inc.
75 Stone Street, Augusta, ME 04330

Name _____Organization_____

Street_____

City/State/Zip _____

Phone _____ Email _____

THE RESIDENTS CORNER

ERIC LOWE, MD, CHIEF RESIDENT
MAINE MEDICAL CENTER EMERGENCY MEDICINE

One of the toughest parts of our jobs, whether it be pre-hospital or hospital based emergency care, is the broad spectrum of human condition, disease, and social difficulty we face. When we first start out, we think that the hard cases will be those we learned about in training: the big traumas, strokes, or respiratory failures. However, once we begin to practice, we realize the presentations rarely match those we read about in the books. We begin to realize that the hard cases are not always the big traumas, codes, or MI's, but often they are the cases that stress our resources in other ways.

Maybe it's the crying infant who checks out fine, except for some vague warning in the back of your mind which we can't put into words, or maybe it's the patient whose social situation stresses the discharge plan. Often, one of the biggest stresses is how the nature of emergency work doesn't allow the time or compassion to help with these issues. Although these are not the most medically challenging cases, they can often wear on us just as heavily as the medical cases. The following piece is one of those situations submitted by one of the second year residents after a recent EMS ride-along experience.

Do you want to get better, or just feel better?

I zipped up my coat to fight Maine's January cold as we approached the house and turned off the sirens on the rig. She was shivering in the corner of a living room with spray paint on the walls, a single couch with orange velour upholstery, and the strong odor of urine from an unknown source. My feet crinkled the newspaper thrown on the floor as I approached her crumpled body, and my first thought was, "At least she is small in case we have to carry her out." She was young, probably 18 years old, beautiful, with long blond hair and big green eyes but also a penetrating toughness to her that ensured me she had lived a lot in her 18 years. I asked her, "Did you call 9-1-1?" She nodded silently and continued to tremble.

She was breathing regularly with clear lungs and was shivering in her t-shirt and jeans. As I noticed her goose bumps I realized that I could see my breath inside the house.

We had been dispatched to a home that was condemned, but where "junkies" now often congregated. I squatted down in the dim light to assess her. She told me that she had called because she thought she had the flu. Her blood pressure was 100/68 and her HR was 115. She was breathing regularly with clear lungs and was shivering in her t-shirt and jeans. As I noticed her goose bumps I realized that I could see my breath inside the house.

She weakly stood up to walk to the ambulance and yawned. I asked how long she had been using; she simply ignored my question. I looked at her arms once inside the rig seeing that they were speckled with recent track marks, none of which showed signs of infection, and when I asked again when she last used, she said, "Yesterday." As I covered her with a blanket I asked, "Did you run out of money?" She replied looking up through her eyelashes, "There are always ways to get money!" She quickly turned to me and said that she had called the ambulance because she had the flu and needed to feel better. I found a vein in her bicep that she had not yet used and started a 20 gauge IV. She told me she had been to rehab before but she picked up the habit again because she got back together with her ex-boyfriend who was also a user. She asked me, "Do you think they'll give me medicine to make me feel better?" I asked, "Do you want to get better or just feel better?" Without thinking she said she wanted to feel better, but on second thought, she also wanted to go to rehab. We pulled into the ambulance bay and I gave report, "23 yo F with flu symptoms, no meds & no allergies. History of IV drug use, requesting rehab. Vitals 115, 100/68, 98% on room air. Lungs clear and heart regular."

I came back later that night to check on my patient. I asked the doctor what had happened to her. He said she had signed out against medical advice because they wouldn't give her any opiates, but not before she told them that she was 2 months pregnant and had decided to keep her baby.

Cyanokit®

To treat or not to treat? That is the question . . .

An exciting new antidote is now available to treat cyanide poisoning. As with all new antidotes, many are anxious to try it, but unsure when use is indicated. The following information may help.

Cyanide poisoning is severe, but relatively uncommon. Sources include: suicide or homicide using potassium cyanide powder; weapon of mass destruction or industrial accident involving hydrogen cyanide gas; metabolism of some chemicals, drugs or plants to cyanide; and combustion of plastics, wool and other materials during a fire releasing hydrogen cyanide.

Cyanide toxicity is not usually obvious. It should be suspected in those who have access (e.g. laboratory personnel) and suddenly become severely ill, patients receiving large doses of nitroprusside for extended periods of time, and victims of fires.

Clinical effects can be vague, and cyanide levels are not available in a clinically-relevant time period. Signs and symptoms include those that would be anticipated with sudden inability to utilize oxygen: headache, anxiety, agitation, confusion, lethargy, seizures, coma, agonal respirations, and cardiovascular collapse. Tachypnea may be followed by bradypnea.

Cyanide prevents patients from using oxygen properly. After ingesting or inhaling cyanide, victims are chemically asphyxiated. The cyanide inhibits cytochrome oxidase, a necessary enzyme in aerobic metabolism. Oxygen that is breathed in cannot be used on the cellular level. Providing oxygen to patients poisoned with cyanide is only minimally helpful.

For many years, a cyanide antidote kit containing an ampule of amyl nitrite for inhalation, sodium nitrite for intravenous use, and sodium thiosulfate for intravenous use has been available. The ampule is available for inhalation until sodium nitrite can be given intravenously, and is of questionable value. The nitrites work by causing methemoglobinemia. The methemoglobin molecule attracts the cyanide away from the cytochrome oxidase, freeing up the enzyme. Even small amounts of methemoglobin may be detrimental in a patient exposed to both carbon monoxide and cyanide in a house or industrial fire. As a result, it is often recommended to treat smoke inhalation victims with thiosulfate, but not nitrites. Thiosulfate detoxifies cyanide more quickly than the body would normally, without assistance. Treatment with nitrites and thiosulfate may lead to clinical improvement within minutes. Giving both is more effective than giving either one alone.

A new antidote for cyanide poisoning, Cyanokit®, contains hydroxocobalamin, not nitrites or thiosulfate. Hydroxocobalamin works by binding cyanide without inducing methemoglobin. For this reason, it is a more attractive option than nitrites with thiosulfate. It is effective alone, or can be used with thiosulfate. It is expensive, at over $600 a kit, but well worth it when needed. The question is, when is this antidote needed?

Cyanide is often rapidly fatal. Prompt treatment can be life saving. Which patients may benefit from treatment can be complicated. A new antidote for cyanide poisoning, Cyanokit®, is available. The question is, when is it needed?

Which antidote is better? Which should be avoided? When? Nitrites can cause headache, dizziness, significant hypotension and methemoglobinemia – a toxic and therapeutic effect in cyanide poisoning. Thiosulfate is fairly benign. Hydroxocobalamin can cause a transient increase in blood pressure and a red discoloration of skin and body fluids, which can last for days. Although studies are limited, it appears that both kits may be effective. Hydroxocobalamin has annoying, but relatively minor adverse effects. As it does not induce methemoglobinemia, it is clearly a better choice for fire victims.

Cyanide is often rapidly fatal. Prompt treatment can be life-saving. Which patients may benefit from treatment can be complicated. If cyanide poisoning is known or strongly suspected, and the patient has life-threatening effects consistent with those above, treatment with either the old or new kit should be provided. Those with lesser effects may do well with thiosulfate treatment. Patients with subacute nitroprusside poisoning, or minor to moderate effects from chronic ingestion of ground peach pits for "cancer treatment," are examples of those who may only need thiosulfate. Victims of fires should be given hydoxocobalamin, with or without thiosulfate, when cyanide treatment is indicated. Patients who arrive at the Emergency Department having improved significantly after oxygen administration and who appear clinically well, probably do not require any treatment for cyanide poisoning. Cyanide poisoning that is less severe can resolve with only supportive care.

When in doubt regarding diagnosis, treatment or availability of antidotes, contact the Northern New England Poison Center at 1-800-222-1222 for immediate consultation.

Designing for Quality in EMS

William H. Dunwoody, MBA, CQIA, CMQ/OE, EMTP

Design is a key component of an effective quality management system. Philip Crosby, an American industrialist and quality expert coined the phrase, "Do it right the first time." He believed in the concept of Zero Defects and promoted process design as a means of building quality into day-to-day operations.

In the delivery of health care services it is even more critical that we do it right the first time. In manufacturing it is possible to inspect the output of the process to identify defects. If defects are found the product can often be reworked to correct the defect, or, in the most severe cases the output can be scraped. The only thing that is lost in this scenario is the cost of the rework or scrap. In health care, on the other hand, the impact of errors that are only identified after the damage has been done take a human toll. Reworking the output of a bad health care process often means additional, prolonged suffering by the patient as well as additional cost to the system. Scraping the output of the health care system usually means the death of a human being as the result of medical errors. In 1999 the Institute of Medicine (IOM) released a report entitled, To Err is Human: Building a Safer Health System. The report revealed that up to 100,000 individuals die each year as a result of the medical care they receive. In subsequent reports, the IOM indicated that operational design and error proofing are the most effective means of preventing errors in the delivery of health care.

So how do we design health care systems with an eye toward Zero Defects?

The first step in designing an error-proof health care system is to define the process as simply and specifically as possible. Some processes lend themselves to global defining statements; an example might be management of chest pain. It should be noted, however, that many processes contain subprocesses of a sufficiently complex nature that the sub-process should be defined by itself. Using the previous example, the process of management of chest pain contains subprocesses of oxygen administration, intravenous cannulation, cardiac monitoring, and medication administration, to name a few. The principle in defining the process is to limit the complexity and number of the operational steps.

The first step in designing an error-proof health care system is to define the process as simply and specifically as possible.

The next step in designing an error-proof health care system is to identify the desired outcome for each of the process definitions. This outcome determination provides a guideline for mapping the process steps and identifying potential failure points.

Once the beginning point (process definition) and end point (desired outcome) have been determined, the next step is to map the steps of the procedure that are defined by the constraints of the process definition and lead to the realization of the desired outcome. The best way to map the process is to use a simple procedural flow chart that outlines action steps, decision steps, and end points. A process map or procedural flow chart is similar to the treatment algorithms developed and used by the American Heart Association in their ACLS and PALS programs.

Upon completion of the process map, an expert team should analyze each step defined in the flow chart and identify any points where human errors can occur. Steps that are prone to human error should be eliminated. If it is not possible to eliminate the step, the team of experts should identify tools that can be put in place to minimize the possibility of human error or lessen the impact of that error. An example of an error-proofing process that is used by many anesthesiologists is to label intravenous medications with colored tape. In situations where multiple intravenous medications are being administered, multiple pumps are being used, and multiple IV sites are being accessed. The management of these multiple medication administration systems can become confusing and could result in a potentially lethal medical error. By labeling the IV bag, the corresponding pump, and the corresponding IV line and infusion site with the same colored tape, the possibility of changing the administration rate of the wrong medication is significantly reduced.

The process of Designing for Quality can be simple or complex depending upon the needs of the organization and the intricacy of the procedure being evaluated. The principle that must be understood is that human beings are prone to errors due to the very nature of the human condi-

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Advances in Prehospital Trauma Management

Rick Petrie, EMT-P

Trauma remains the leading cause of death in the 1 – 44 age group, and kills 80 times more people each year than died in the first 3 years of the Iraqi conflict.[1] Because of these numbers, trauma receives an increasing amount of attention in order to find ways to reduce morbidity and mortality. The purpose of this article is to highlight some of the recent changes in trauma management that have come about through our experiences in the war, the research from the Brain Injury Foundation, and the evolving research completed by focus organizations committed to injury prevention.

Bleeding Control

For as long as most of us can remember, bleeding control consisted of four primary steps; direct pressure, elevation, pressure points, and tourniquets. While direct pressure remains the primary and most successful method of controlling bleeding, elevation and pressure points have been de-emphasized because there is no data to indicate that these techniques work and may actually delay bleeding control. If you have a patient with arterial bleeding of an extremity, you should attempt to control the bleeding with direct pressure. If you are not able to immediately control the bleeding, apply a tourniquet. The guiding principle here is that every red blood cell counts![2] The tourniquet should be placed immediately proximal to the injury site, tightened until the arterial bleeding is stopped, and left in place until reaching the hospital. The exception to this rule would be an extended transport time. If the transport time is greater than 2 hours, contact on-line medical control for management options. Used appropriately, tourniquets are safe and effective tools that save lives.[3]

Typically, cravats have been used as tourniquets by wrapping it around the extremity, tying a knot in the bandage, placing a wooden or metal rod over the 1st knot, then tying a second knot over the rod. The rod is then twisted until bleeding is controlled, then the rod is secured. The problem with this technique is that it requires time to set up, and an improvised device to use as a rod. If a patient has an arterial bleed, this lost time could be detrimental to the patient. The US military has developed a strong interest in supplying troops with effective and easy to use tourniquets, which has spawned a number of commercially developed tourniquets that are easy to find on the internet or through local EMS medical supply distributors. Blood pressure cuffs can also be used as tourniquets.

Topical Hemostatic Agents have also been introduced as a way to control bleeding. The early versions of the various products had some issues with effective bleeding control and surrounding tissue damage, but recent developments to these products have overcome these issues. Therefore, hemostatic agents may be an effective tool to control bleeding, particularly in prolonged transport situations. The Maine EMS Medical Direction and Practice Board have approved the use of contained Hemostatic agents as long as the particular product has been reviewed by the MDPB. A contained Hemostatic agent is one that is part of a sponge or application device that is bandaged into a wound as opposed to loosely sprinkled into the wound. Currently, the only product approved is QuickClot, but Maine EMS may be queried to see if other products have been added.

Fluid Resuscitation

We have seen dramatic shifts in the use of fluid resuscitation over the last several years, and now we are attempting to put a finer point on the recommendations in order to differentiate between the needs of different trauma patients. Basically, trauma patients need to be classi-

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Designing for Quality

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tion. To prevent the possibility of human error from having a negative impact on the delivery of health care, systems should be designed and implemented to either remove the human element from the system or to provide the necessary tools to assist the human operators in the effective delivery of health care services.

Bill Dunwoody is the primary consultant and educator of the International Institute for Organizational Excellence. He is a national speaker and author on the subjects of quality management, process improvement, and performance excellence. He can be reached for comment at whd@iioe.net.

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fied as either controlled or uncontrolled bleeding.

Controlled bleeding are those situations where the bleeding is visible, able to be controlled (even with a tourniquet), and the provider is convinced that there is no other bleeding that is not able to be controlled. Patients who fall into this category and are showing signs and symptoms of shock should receive an initial bolus of 1 – 2 liters to restore normal vital signs.[4, 5]

Uncontrolled bleeding are those situations with suspected internal bleeding. Patients who fall into this category should have their fluids titrated to maintain a systolic blood pressure of between 80 – 90 mm Hg.[6, 7] The exception to this rule is patients with suspected Traumatic Brain Injury (TBI). These patients should have the fluids titrated to maintain a systolic blood pressure above 90 mm Hg.[8, 9]

Lactated Ringers is the fluid of choice for the resuscitation of trauma patients because its composition is most similar to the electrolyte composition of plasma, but Normal Saline remains an acceptable alternative. Fluids should be warmed to a temperature of 102°F prior to infusion in order to avoid dropping the patient's body temperature and contributing to increased hemorrhage.

Other Shock Management Issues

Trendelenburg has been de-emphasized as well because there is no data to support it as an effective tool and there is some data indicating that it may actually be harmful to the patient because of pressure on the diaphragm and increased intracranial pressure.[10, 11]

MAST Trousers remain controversial. Some still advocate for its use in isolated pelvic injuries to stabilize the pelvis and help control bleeding. MAST Trousers are still acceptable for use under Maine EMS protocols, but providers must contact on-line medical control prior to use.

Airway and Ventilation

Airway management is a controversial topic on a national level because of the controversy surrounding advanced airway procedures. Regardless of how this debate resolves, appropriate airway management is critical to the survival of the trauma patient. Providers should be aggressive about establishing and maintaining a viable airway appropriate to their license level. Maine EMS has expanded the tools available to providers for airway management, but none are more important than the confirmation tool of capnography. If services have capnography, they should make sure that all of their providers are trained in its use. Also, providers must ensure that they use it to confirm airway control and maintenance. If a service does not have capnography, they should take whatever steps are necessary to obtain the technology.

The research conducted by the Brain Injury Foundation has also demonstrated that both hyperventilation and severe hypoxia in the prehospital setting were associated with increased mortality.[12] EMS personnel should strive to maintain SpO2 of 95% while ensuring that assisted respirations are delivered in a controlled manner for those patients who need assistance. Normal ventilation rates should be used (10-12 br/min adults; 20 br/min children; 25 br/min infants) unless the patients are showing signs and symptoms of increased intracranial pressure (Cushing's Triad) and herniation (blown pupils and posturing). In this circumstance, mild hyperventilation is indicated (20 br/min adults; 30 br/min children; 35 br/min infants). The best tool to manage these patients is capnography. Apply capnography and maintain the PaCO2 in the low normal range, 34 – 38 mm Hg.

The information presented in this article represents the continuation of a shift in EMS towards evidence-based practice. The following quote from Norman McSwain, MD, FACS, NREMT-P, Medical Director for PHTLS underscores one of the biggest challenges facing EMS providers today; staying current in the face of rapidly changing patient care standards.

"Our patients did not choose us. Rather, they present to us because of some traumatic occurrence that has resulted in injury requiring our assistance. We, however, have chosen to treat them. We could have chosen another profession, but we did not. We have accepted the responsibility for patient care in some of the worst situations: when patients are at their most stressed and anxious, when we are tired or cold, when it is rainy and dark, and often when conditions are unpredictable. We must either accept this responsibility or surrender it. We must give our patients the very best care that we can – not with unchecked equip-

ment, not with incomplete supplies, not with yesterday's knowledge, and not with indifference. We cannot know what information is current, and we cannot claim to be ready to care for our patients, without reading and learning each day."[13]

I encourage you to read the research cited at the end of this article as well as develop an understanding of what constitutes medical literature and how it is used to change our practice. If you would like to learn more about medical literature and using the internet to research particular topics but are unsure where to start, send me an e-mail (rpetrie@kvems.org) and I will send you some information to get you started.

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Maine EMS Honor Guard

LT. ALLAN PARSONS, PARAMEDIC
MED-CARE AMBULANCE

The Maine EMS Honor Guard and the family of Allan Parsons, Paramedic, will be traveling to the National EMS Memorial Service, in Roanoke, Virginia for the service on May 24th, 2008. Allan lost his life in the line of duty, while participating in an Emergency EMS operation on July 5, 2007, at 0300 hours.

Several years ago, in 1994, The Maine EMS Honor Guard / Color Guard was formed. At that time donations were solicited to purchase flags and uniforms. Uniforms were purchased for nine members and three flags, including a custom made "EMS Honor Guard" flag. These nine dedicated people have spent many hours and days on the roads of the State of Maine, representing the Maine EMS community at awards ceremonies and memorial services.

These people have "posted the colors" at several locations for various events more than twelve times a year. This kind of volunteer activity is three times greater than originally anticipated. These people are proud to represent you, the Maine EMS community.

We have traveled to Roanoke, Virginia to represent the State of Maine at the National EMS Memorial Service where Maine EMS persons have been recognized twice before.

We are asking for tax deductible donations to fund the trip to Roanoke and for ongoing expenses of The Honor Guard. We are requesting "Honorable Dollars" from each Maine EMS person be donated to the fund to cover expenses related to the Roanoke trip and other ongoing expenses. We are asking service Chiefs or individuals to coordinate this adventure. For more information on the event, go on line to http://nemsms.org.

Make checks payable to Southern Maine EMS, Honor Guard Fund.

Please send your donations to:
SMEMS, HONOR GUARD FUND
496 Ocean Street
South Portland 04106

If you have any questions about the Maine EMS Honor Guard / Color Guard, please call Ron Morin, Director at 1-800-660-4307. Email: rsqvehic@tdstelme.net

MAINE EMS TEAM LEADERS

Ever wondered who to call when you have a question, complaint, concern or compliment about your EMS system? Listed below are the members of the Maine EMS Board, Maine EMS Staff, and the Regional Coordinators and Medical Directors. Each and every EMS team member in Maine is encouraged to get involved with how your system is run. So get involved—give us a call!

Maine EMS Board Members

Southern Maine EMS Rep	Ron Jones, EMT-P	23 Sterling Drive, Westbrook, ME 04092	TEL: 854-0654
Kennebec Valley EMS Rep	Tim Beals, EMT-P	PO Box 747, Waterville, ME 04903	TEL: 872-4000
Aroostook EMS Rep	James McKenney, EMT-P	229 State Street, Presque Isle, ME 04769	TEL: 768-4388
Tri-County EMS Rep	VACANT		
Northeastern EMS Rep	Paul Knowlton, EMT-P	274 Pearl Street, Bangor, ME 04401	TEL: 941-5100
Mid-Coast EMS Rep	Steven E. Leach, EMT-P	PO Box 894, Union, ME 04862	TEL: 785-2260
Physician Rep	Peter DiPietrantonio, DO	4 Picnic Hill Road, Freeport, ME 04032	TEL: 373-2220
Nurse Rep	VACANT		
First Responder Service	Richard Doughty, EMT-P	4153 Union Street, Levant, ME 04456	TEL: 941-5900
Emergency Medical Dispatch	James E. Ryan, Jr.	62 Main Trail, Hampden, ME 04444	TEL: 570-3773
For Profit Service	Joseph Conley, EMT-P	11 Deer Hill Avenue, Standish, ME 04084	TEL: 642-5854
Not For Profit Service	Bob Hand, EMT-P	100 Hill Street, So. Paris, ME 04281	TEL: 890-6350
State Medical Control Director	Steven E. Diaz, MD	Maine EMS, 152 State House Station, Augusta, ME 04333	
Hospital Rep	VACANT		
Municipal EMS Service Rep	Wayne Werts, EMT-P, Chief	Auburn Fire Department, 550 Minot Avenue, Auburn, ME 04210	TEL: 783-6931
Fire Chief Rep	Roy Woods, Chief	Caribou Fire Department	
Public Rep	VACANT		
Public Rep	Oden F. Cassidy	RR 2, Box 960, Houlton, ME 04732	TEL: 532-3941

Maine EMS State Office Staff

152 State House Station,
Augusta, ME 04333-0152
TEL: 626-3860 | FAX: 287-6251
maine.ems@maine.gov
www.maine.gov/dps/ems

Jay Bradshaw, EMT-P, Director
jay.bradshaw@maine.gov

Drexell R. White, EMT-P, EMD Coordinator
drexell.r.white@maine.gov

Jan Brinkman, RN, EMT-P
Training and Education Coordinator
jan.brinkman@maine.gov

Dawn Kinney, EMT-P, Licensing Agent
dawn.l.kinney@maine.gov

Alan Leo, EMT, Licensing
alan.p.leo@maine.gov

Ben Woodard, EMT
EMS Data and Preparedness Coordinator
ben.woodard@maine.gov

Karen Cutler
Administrative Assistant
karen.m.cutler@maine.gov

Regional Coordinators and Medical Directors

REGION 1 — Donnell Carroll, Southern Maine EMS Council — Dr. Anthony Bock, Medical Director
496 Ocean Street, South Portland, ME 04106
TEL: 741-2790 | FAX: 741-2158 | smems@smems.org

REGION 2 — Joanne LeBrun, Tri-County EMS Council — Dr. Kevin Kendall, Medical Director
300 Main Street, Lewiston, ME 04240
TEL: 795-2880 | FAX: 753-7280 | lebrunj@cmhc.org

REGION 3 — Rick Petrie, EMT-P, KVEMS Council — Dr. Tim Pieh, Medical Director
71 Halifax Street, Winslow, ME 04901
TEL: 877-0936 | FAX: 872-2753 | office@kvems.org

REGION 4 — Rick Petrie, EMT-P, Northeastern Maine EMS — Dr. Jonnathan Busko, Medical Director
EMCC, 354 Hogan Road, Bangor, ME 04401
TEL: 974-4880 | FAX: 974-4879 | neems@emcc.org

REGION 5 — Steve Corbin, Aroostook Maine EMS — Dr. Jay Reynolds, Medical Director
111 High Street, Caribou, ME 04736
TEL: 492-1624 | FAX: 492-0342 | aems@mfx.net

REGION 6 — Bill Zito, Mid-Coast EMS — Dr. David Ettinger, Medical Director
Thompson Community Center
Routes 131 and 17, PO Box 610, Union, ME 04862
TEL: 785-5000 | FAX: 785-5002 | office@midcoastems.org

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State of Maine EMS
152 State House Station
Augusta, ME 04333-0152